September 8, 2008

Mr. John Bunyak
Air Resources Division
National Park Service
P.O. Box 25287
Denver, CO 80225

Re: FLAG 2008 Comments

Dear Mr. Bunyak:

The purpose of this letter is to provide comments on the FLAG 2008 draft report. We believe the modifications to the FLAG guidance represent substantial improvement. We would like to provide two comments on the proposed new guidance, which follow.

On page 34 in paragraph 2, it is stated that, "The 98th percentile test applies to the number of days that *any* model receptor in the Class I area exceeds the threshold." The analysis of the predicted increase in extinction by the proposed source should be performed paired in space, i.e., with each receptor's calculation performed independently of other receptor's calculations. In this way, all inputs are defined and calculated at each receptor separately, and not mixed over many different receptors which have different input conditions.

Past practice by the NPS has been to consider these modeled extinction changes unpaired in space, where values of calculated extinction were combined or totaled over many or all receptors in a Class I area. We disagree with this aspect of the procedure. We agree that it should apply to any and all receptors in a Class I area. However, since all input conditions to the calculation of extinction at a receptor vary by receptor, i.e., model-computed concentrations of each pollutant, location, elevation, meteorological conditions, etc., it is not logical to combine calculated quantities at separate receptors that are based on inconsistent input conditions at different receptor locations. A park visitor's experience of visibility at one location is not objectively linked to a visitor's experience of visibility at another location.

Pollutant concentrations and extinction all vary by receptor. The calculation of extinction change and possible exceedances of a threshold should be calculated at each receptor independently so that all input conditions are consistent for each receptor, rather than mixing inconsistent calculations from other receptors. Performing the visibility analysis with all receptors treated separately and independently of one another is standard practice in virtually all air quality modeling calculations. Once the visibility counts at each receptor are calculated independently, then one should find the maximum number of potential exceedances of a threshold. There is no reason why counts of exceedances should be totaled over all receptors, but rather it makes more sense to treat each receptor separately and then find the maximum number of potential exceedances.

The second comment relates to the discussion of the use of PLUVUE for the near-field, steady state (at distances less than 50 km) visibility analysis on page 30. In the third paragraph it is stated that there is no established procedure for performing this analysis for multiple sources or plumes, and that the techniques for distant/multi-source impacts (i.e., Calpuff) could be used as an alternative on a case by case basis. We agree with this idea and believe there are enough uncertainties and ambiguities in the plume blight/PLUVUE analysis that there should be substantial flexibility in using Calpuff instead of PLUVUE where such uncertainties exist.

Thank you for the opportunity to comment on the proposed guidance. If you have any questions on the above, feel free to contact me.

Respectfully,

Terry L. O'Clair, P.E.
Director
Division of Air Quality

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